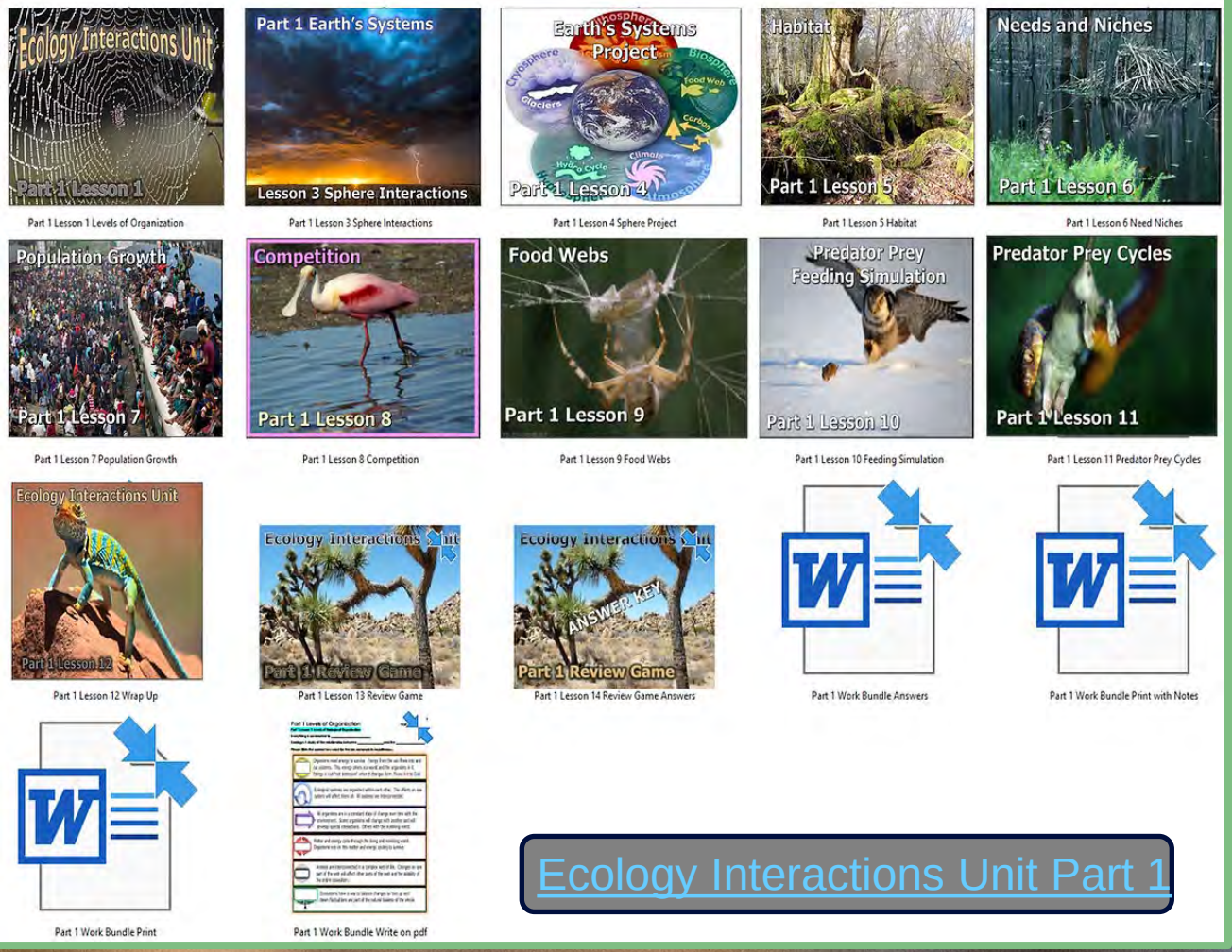
Part 1: 13 Lessons of 50 minutes, and 30 Page Work Bundle, Levels of Biological Organization (Ecology), Big Concepts in Eco-Literacy, Diagram of the Levels of Biological Organization, Individuals, Populations, Communities, Ecosystems Large and Small, Biomes, Biosphere, Making a Pyramid of the Levels of Organization Activity, Earth's Spheres, Atmosphere, Hydrosphere, Cryosphere, Lithosphere, Geosphere, Ecosphere, Sphere Interactions, Examples of Sphere Interactions, Hydrosphere Interaction Demo, How Matter and Energy move through the Spheres, Sphere Interaction Project, Habitat, Examples of Animals and their Habitat, Microhabitats, Habitat Lab Activity, Needs of Organisms, Ecological Niche, Case Study on the African Dung Beetle, Fundamental Niche vs Realized Niche, Human Population Growth, Carrying Capacity, R and K Species, Animal Competition, Types of Competition, Intraspecific Competition, Interspecific Competition, Interference, Exploitative Competition, Competition Quiz, Competitive Exclusion Theory, Animal Competition Simulation of Spoon Beaks vs. Grabber Beaks, MacArthur's Warblers Case Study, Animal Interactions, Food Webs, Food Web Collapse Class Activity with String, Predator Prey Relationships, Feeding Strategies, Generalists vs. Specialist, Foraging Simulation with Bean Seeds in the Grass, Herbivore Survival Strategies, Predator Prey Cycles, Predatory Prey Cycle Notecard Toss Activity, Density Dependent and Density Independent Limiting Factors, Box Games, Board Game Review, Crossword Puzzle, Assessment.



Ecology Interactions Unit Part 1

Ecology: Levels of Organization, Earth's Spheres, Habitat, Food Webs

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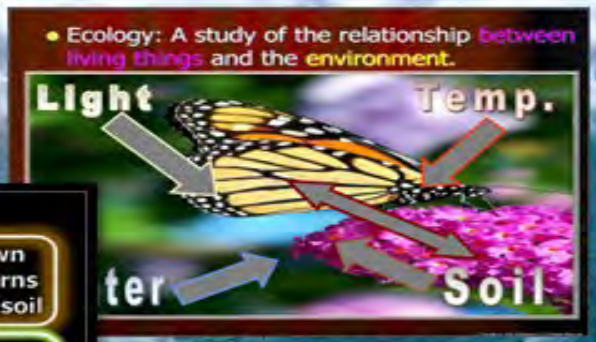
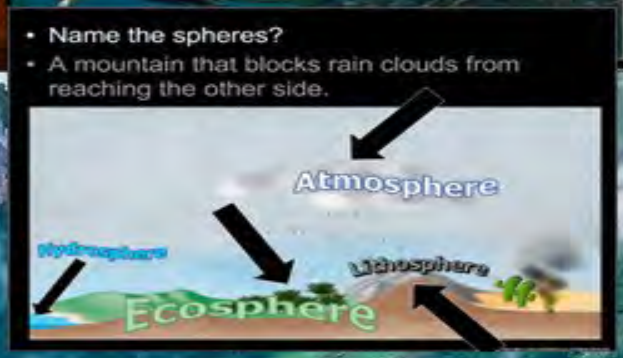
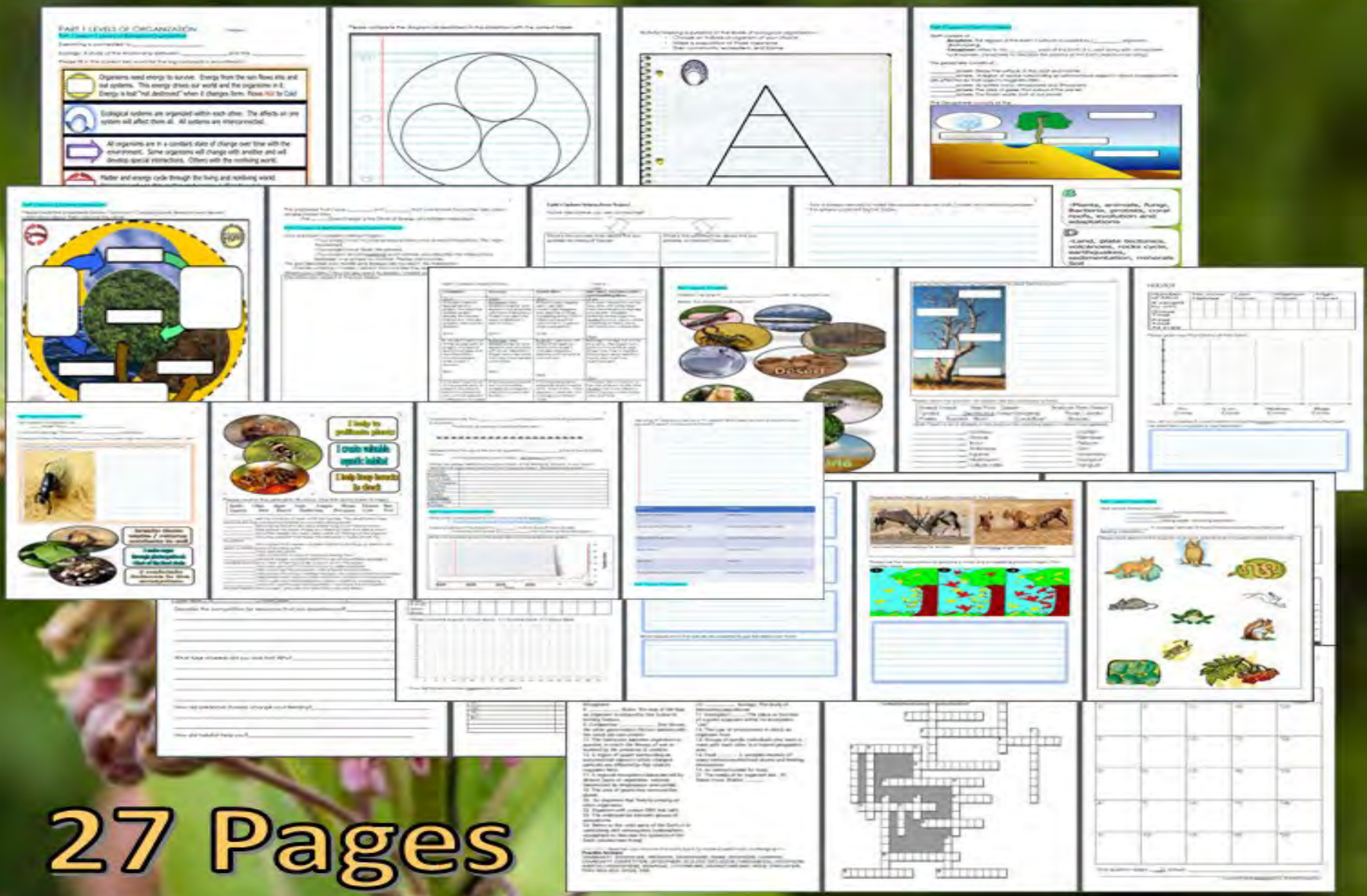




13 Lessons

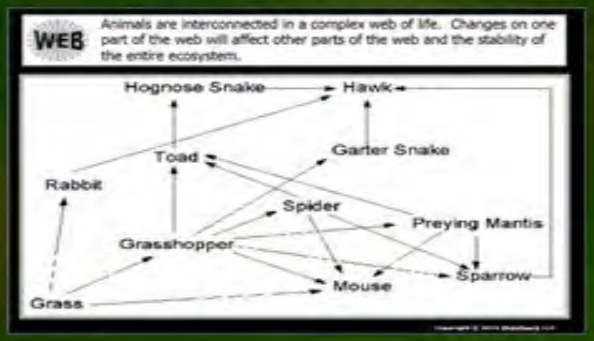
Interactive Slideshows

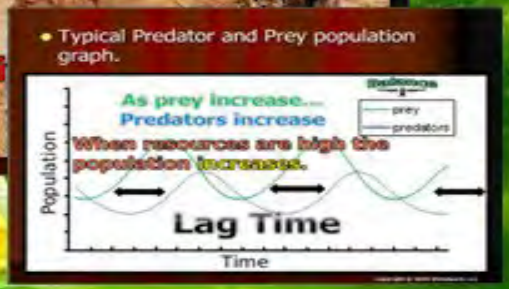
Follow Along Work Bundle

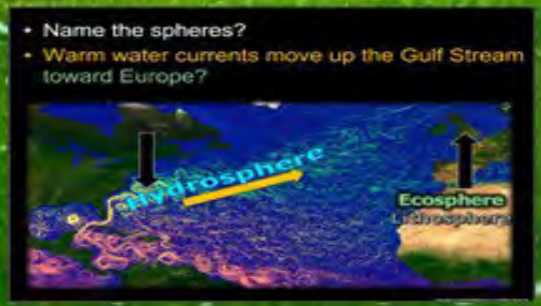


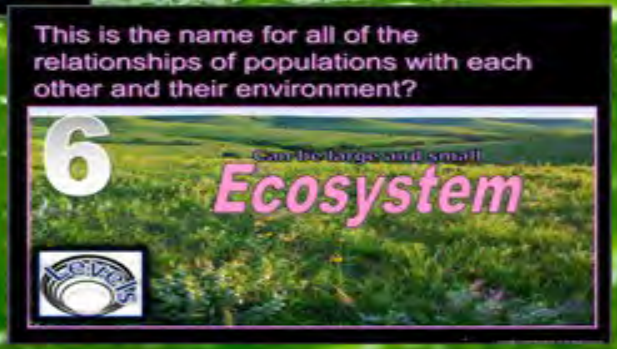
27 Pages

Activities, Projects, Assessments, and more







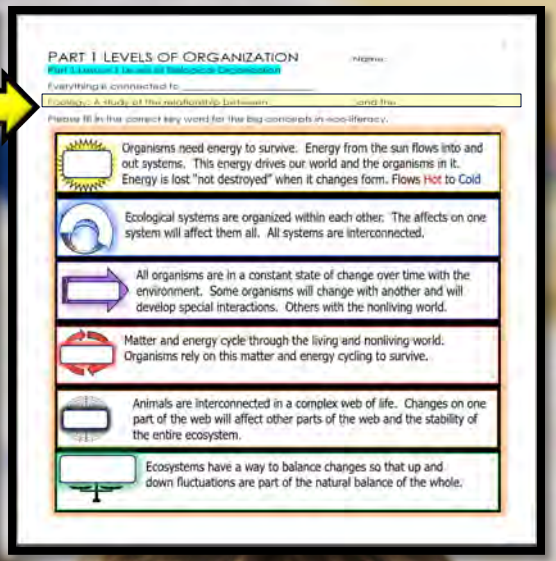


SlideSpark Science

MIDDLE-LEVEL EDUCATIONAL RESOURCES

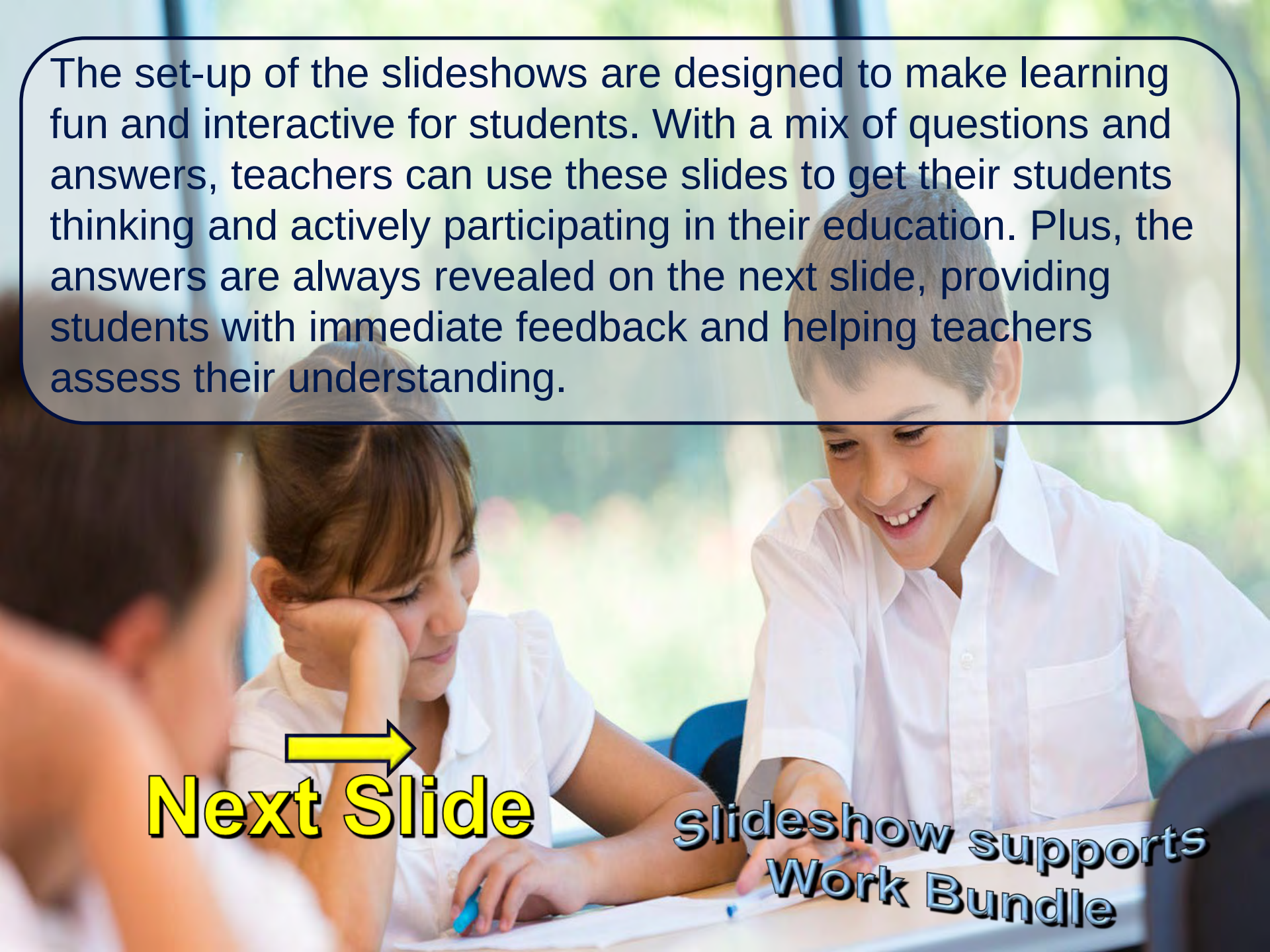
Interactive slideshows provide the roadmap for an amazing learning experience for students in grades 5-9. A Detailed set of work bundles chronologically follow the digital learning, providing a clear and intuitive roadmap to understanding. As the teacher or student advances through a slideshow, exciting hands-on activities, fantastic visuals, fill-in notes, review opportunities, video links, assessments, and much more are strategically placed throughout. Interactive learning unfolds step by step and supported by the work bundle to reach all types of learners. Everything you need to run to an amazing learning experience is provided in this one-of-a-kind science curriculum.

Each unit in the curriculum is designed to help teachers deliver the best possible learning experience for their students. Our interactive science slideshows are filled with questions and answers, important fill-in notes, hands-on activities, projects, games, built-in quizzes, and end of the unit assessment pieces. Students follow along with a work bundle that documents the entire learning experience for a fantastic review and assessment piece.



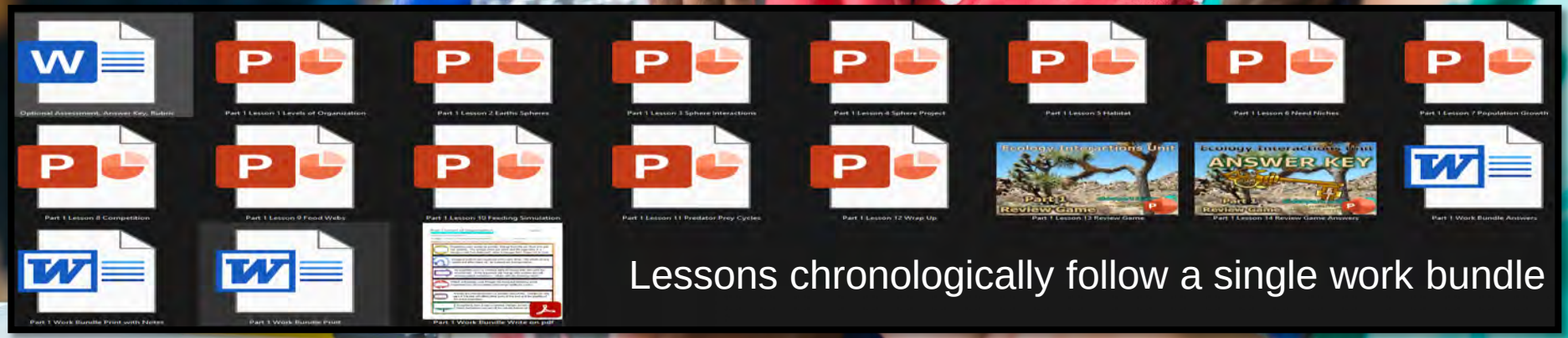
Red Slide Notes: Help students record important information in a fun and easy-to-understand way. Designed red-colored slides contain a few pieces of crucial information that students must record into their work bundle to complete the notes. Students will use these important notes throughout the work bundle.

The set-up of the slideshows are designed to make learning fun and interactive for students. With a mix of questions and answers, teachers can use these slides to get their students thinking and actively participating in their education. Plus, the answers are always revealed on the next slide, providing students with immediate feedback and helping teachers assess their understanding.



Lesson Planning

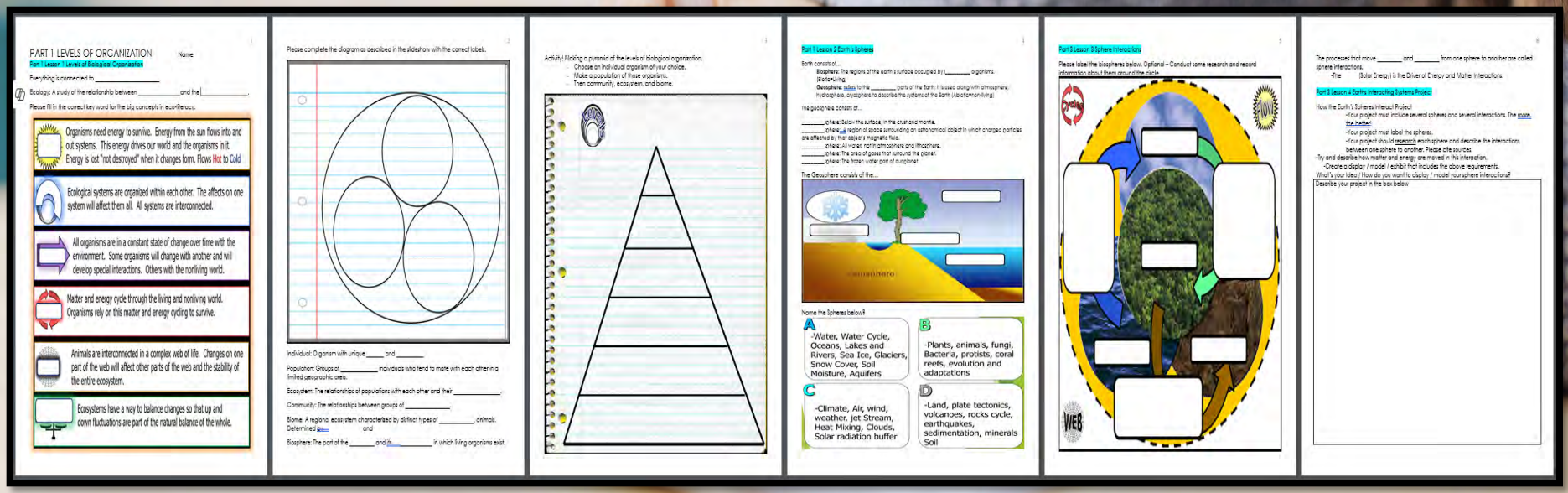
Daily lessons space exciting hands-on activities, red slide notes, video and academic links, projects, simulations, readings, built-in quizzes, and review opportunities throughout the slideshows. A typical day may have many different learning styles being targeted. Daily lesson planning becomes advancing through the slideshow roadmap the night before. Each lesson is roughly 50 minutes, but sometimes things can speed up or slow down. The best strategy is just to go at your classes own pace. The work bundle chronologically follows the interactive slideshow and you can always spend extra time assessing the quality of the writing within. If you don't quite finish a lesson, you can always pick it up the next day where you left off. The only real trick in timing is not starting a larger activity if you don't have the available time to complete. The slideshows have been designed to be a low stress, go at your classes own pace experience. Most activities are designed to be cost effective, using general materials that can be gathered from your local stores.



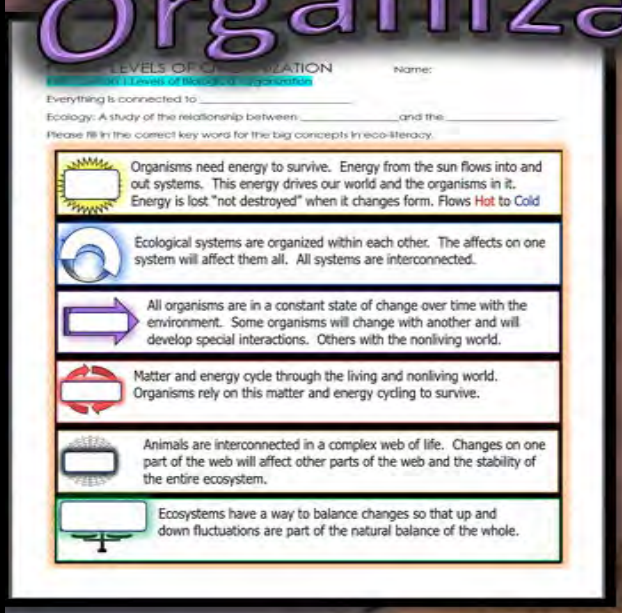
Lessons chronologically follow a single work bundle

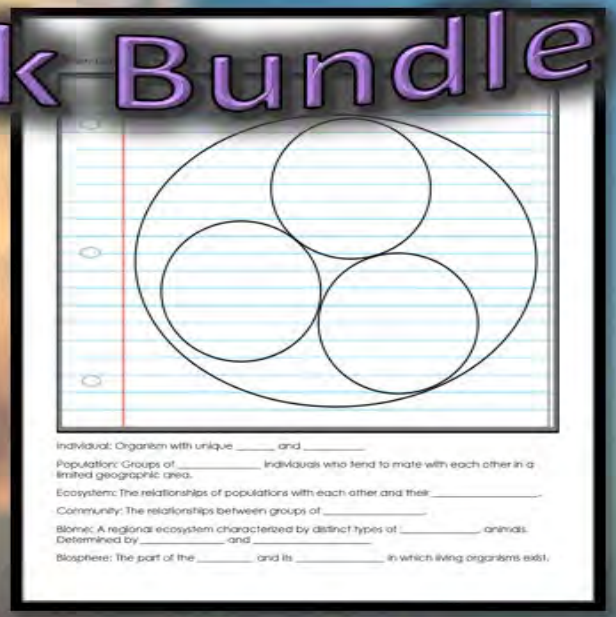
Follow Along Work Bundle

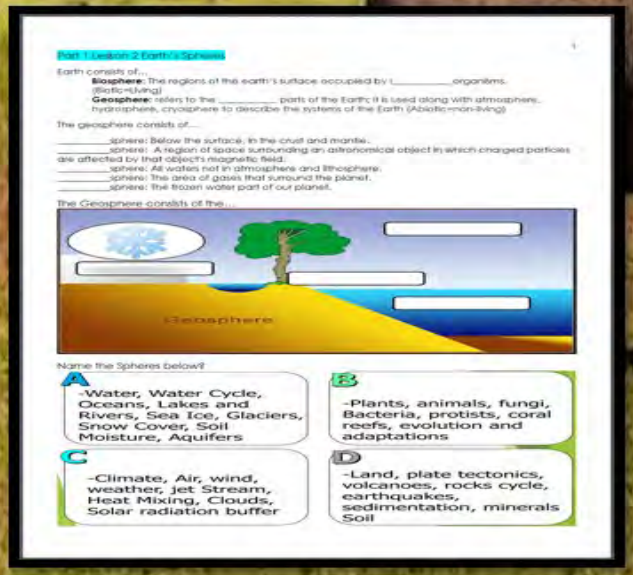
Each science unit includes a single printable work bundle that stays with students from start to finish. Just print and distribute on day one—no daily handouts needed. The bundle follows the unit chronologically and includes everything: fill-in notes, diagrams, quizzes, lab activities, with follow up questions and much more. It's used daily, supports the end-of-unit quiz game, and is handed in for an additional assessment. Answer keys, some writable .pdf versions, and digital versions are also included for flexible classroom use..

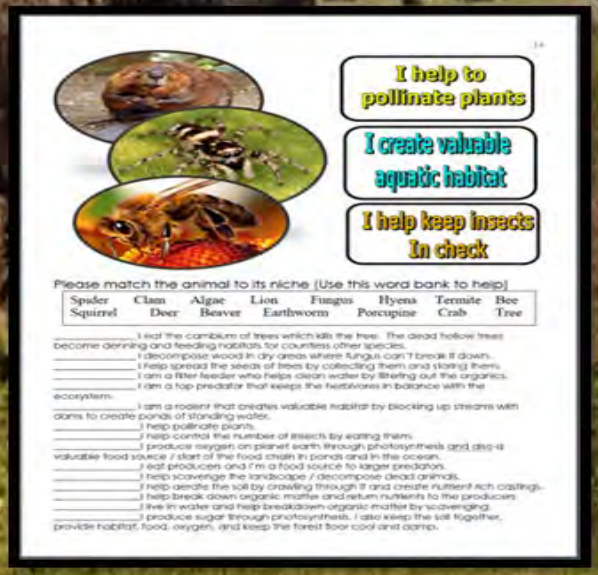


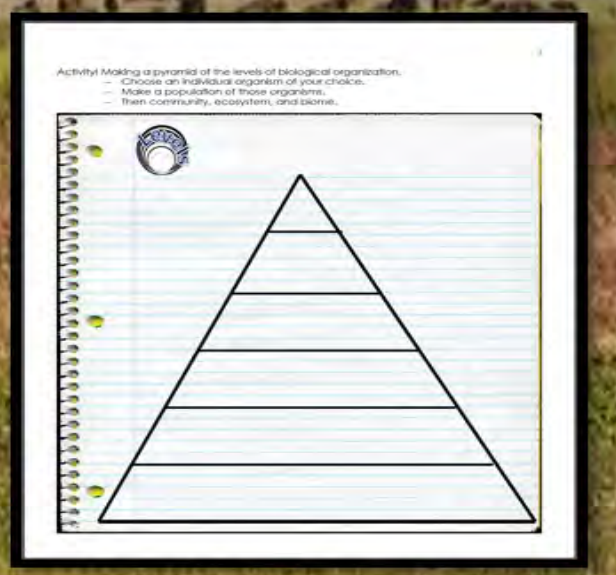
Ecology Levels of Organization Work Bundle











Earth's Spheres

Sphere Interactions

Habitat

What are the needs of living things? Does this dead tree have value?

Please match the animal to its habitat (Use this word bank to help):

Boreal Forest	Tide Pool	Desert	Tropical Rain Forest
Tundra	Deciduous Forest	Savanna	Polar / Arctic
Prairie	Eyelash River	Coral Reef	Estuary

-Note: There's a lot of diversity in the world so the matching below is meant to be general.

_____ : Monkey
_____ : Moose
_____ : Trout
_____ : Antelope
_____ : Squirrel
_____ : Mushroom
_____ : Follicle Mite

_____ : Starfish
_____ : Reindeer
_____ : Pelican
_____ : Lion
_____ : Anemone
_____ : Scorpion
_____ : Penguin

Part 1 Lesson 5 Habitat

Habitat: The type of _____ in which an organism lives.

Match the organism to its habitat?

line processes that move _____ and _____ from one sphere to another are called sphere interactions.

-The _____ (Solar Energy) is the Driver of Energy and Matter Interactions.

Part 2 Lesson 4 Earths Interacting Systems Project

How the Earth's Spheres Interact Project

-Your project must include several spheres and several interactions. The more the better!
-Your project must label the spheres.
-Your project should research each sphere and describe the interactions between one sphere to another. Please cite sources.

Try and describe how matter and energy are moved in this interaction.

-Create a display / model / exhibit that includes the above requirements.

What's your idea / How do you want to display / model your sphere interactions?

Describe your project in the box below:

How is energy needed to make the processes above work / make the interactions between the spheres possible? Explain below.

What are you going to do for your project? _____

What materials do you need from the teacher? _____

Is this project doable in the time that we have? _____

What questions do you have? _____

Okay – Use paper to sketch out a rough draft.

Earth's Spheres Project Rubric

Name:
Due:

Completion	Accuracy	Student Work	Risk Taken, Due Dates, Extra's, and Something More...
20 pts	25 pts	25 pts	25 pts
A Student meet all requirements of project. Included and labeled several spheres and several interactions. Included properly cited source / research. 25 pts	**Spheres** were labeled correctly, and research was accurate with many interactions. Project was clear and easily understood / easy to follow 25 pts	**A** Work is clear, legible, neat, uses well-constructed diagrams and sketches or other. No spelling errors. GUVI's, clearly a strong time commitment. Colored when appropriate. 25 pts	**A** Student handed it in on the due date, with some clear time commitment to neatness and quality. Excellent behavior during class time. Students found a way to create something fantastic. Some neat extras and unexpected. 25pts
B Student meets most of the requirements of project. Included at least two spheres and two interactions. Included properly cited source / research. 20pts	**B** Spheres were labeled correctly, and research was accurate with some interactions. Project had a few parts that may have needed some clarity 20pts	**B** Work is well done with some minor spelling / GUVI's, and student included diagrams / sketches with some time commitment. 20pts	**B** Student handed it in on the due date. The project was good but could have used some more time to create a final project. Good behavior during class work time. A good project. 20pts
C Student meet some of the requirements of project. Included at least two spheres but did not have research / interactions. No cited source / research. 15 pts	**C** Spheres were present but not accurately labeled and research / interactions were hard to follow. 15 pts	**C** Some spelling errors especially environmental print. Some GUVI's, a few diagrams / sketches. Not a strong commitment. 15 pts	**C** Student did not hand in of the due date but shortly after. Students had to be talked to about staying on-task during class work time. 15 pts
D/X Many incomplete parts / did not include earth's spheres and interactions. No Cited Source 10pts / 5pts / 0 pts	**D/X** Many errors and inaccuracies. Difficult to understand. Little to no research present. 10pts / 5pts / 0 pts	**D/X** Many errors in spelling, GUVI's, and little to no sketches, diagrams, and charts. 10pts / 5pts / 0pts	**D/X** Late / Not handed in. The student was not well behaved during class work time. 10pts / 5pts / 0pts

Comments: _____

Grade: _____

Earth's Sphere Interactions Project

Name the spheres you are connecting!!

_____ -> _____ -> _____

What's the process that allows the two spheres to interact? Explain	What's the process that allows the two spheres to interact? Explain

Citation:

Can you cite the source for your research.

Feel free to visit a source that makes citing a website easy such as:

https://www.easybib.com/

Competition
Population
Growth

16

Are we an "R" Species, or are we a "K" species? What does this have to do with human population growth and our environment?

R Species	K Species
Organism is very small size	Large Organism
Energy to make a new organism is low	Energy to make a new organism is high
abies made at once	Low number of babies made at a time
aturity	Long time for maturity
Short Life	Long Life
Each individual reproduces once and then dies	Individuals can reproduce many times throughout life

15

Fundamental Niche: The _____role, place, or function that a species has within its ecosystem.
This is what an organism wants but rarely gets.

Realized Niche: The way of life that an organism is _____to live in due to limiting factors.
Not the best situation but it works... Sometimes [Don't Die]

Partner up, please determine the jobs of each of the following "players" in your town? Teachers will assign each pair one from the group below. Be prepared to present.

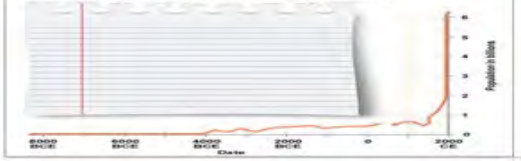
Principal	
Custodian	
Lunch Staff	
Bus Company	
Teachers	
Students	
Parents	
Tax Payers	
Dept. of Ed.	
Farmers	

Part 1 Lesson 7 Population Growth

What is the current population of humans on planet Earth? _____
– https://www.worldometers.info/world-population/

Carrying Capacity: The amount of _____ that an area of land will yield.
Therefore, the number of _____ that an area of land will support.

What is so concerning about this graph about human population growth.



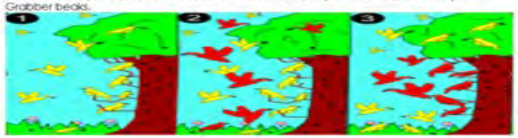
19

Please describe the type of competition based on the pictures below.

Two male Oryx competing for females

Hyena trying to get food from lion.

Please use the picture below to describe a niche and competitive exclusion theory. Think Grabber beaks.

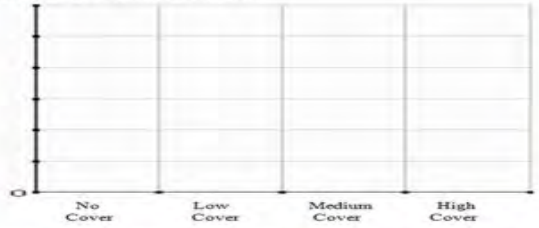


12

Habitat

Number of Mice	No cover Habitat	Low Cover	Medium Cover	High Cover
# caught by you				
Group Total				
Final Total All trials				

Please graph your final total for all trials below



How did an increase in cover habitat change the amount of mice captured by the foxes? Use data from your graph in your response.

13

Part 1 Lesson 6 Needs and Niches

The needs of an organism are...
_____, Water, Food, _____, _____

Community ecology: The study of _____ populations.

Ecological Niche: The place or _____ of a given organism within its ecosystem. "Job"

Please describe what the ecological niche of an African Dung Beetle might be. – You may need to do some research.

Niche

Breaks down waste / returns nutrients to soil

I make sugar through photosynthesis -Start of the food chain

I maintain Balance in the ecosystem

Food Webs

Mushrooms, Competition, Rainbows, Tacos, Space, Water, Sell by dates, Coin Starch, Sunlight, Diseases, Holidays, Wipes, Hunting, Rechargeable Batteries, Dictionaries, Predators, Whistles Energy Drinks, Magic Markers, Parasites, Almonds, Cans, Folds

From the circled list above, which are density dependent and which are density independent?

Density Dependent	Density Independent

Which box is showing a density dependent limiting factor, and which is showing a density independent limiting factor? **Explain**

Part 1 Lesson 8 Competition

Competition: The _____ between organisms or species, in which the fitness of one is _____ by the presence of another.

Four types of competition

_____ specific competition: Over resources between different species.
_____ specific competition: The same species compete for resources.
Interference competition: fighting / disrupting.
_____: Sharing resources.

Activity Quiz! 1-10 = bonus. Name the type of competition.

- Interspecific, Intraspecific, Interference, Exploitative

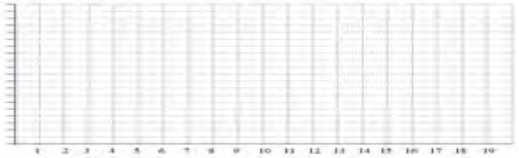
1)	2)	3)
4)	5)	6)
7)	8)	9)
10)	*) 11)	

Competitive Exclusion: One thrives, the other goes _____.
No two species with the same job can _____.
_____: All organisms exist in _____ competition for available resources. Those that create a competitive advantage will flourish at the expense of the less competitive. No two organisms can have the same niche. One lives, the other dies.

Competitive Exclusion Activity

Species	1	2	3	4	5	6	7	8	9	10	11
# (X) Grabber Beaks											
# of (O) Spoon Beaks											

Please complete a graph of your results. X = Grabber beak. O = Spoon Beak



Part 1 Lesson 9 Food Webs

Most animal interactions are...

_____ for the same food supply.
_____ (predators)
_____ being eaten (avoiding predators).

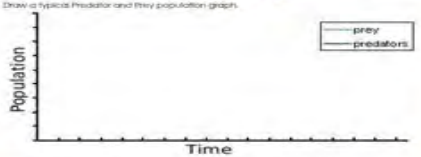
_____: A complex network of many interconnected food chains and feeding interactions.

Please draw arrows to the organism that each species eats to correctly create a food web.

Predator Prey

Please graph your data over generations. (R = Rabbits, C = Coyotes)

Draw a typical Predator and Prey population graph.



Circle the limiting factors from the list below that were described in class!

How did this activity show Interspecific competition?

How did this activity show Intraspecific competition?

Which bird species was better adapted to eat the seeds?

What happened to the species less adapted to get the seeds over time?

Part 1 Lesson 10 Feeding Simulation

Predator: An organism that lives by _____ on other organisms.

Prey: An animal hunted for _____.

"Generalists don't waste energy looking for high quality food. Eat the _____!"

Specialists use lots of time and energy to find the _____ foods.

Gregarious: Tending to form a _____ with others of the same species.

Test Part	Second Part	Third Part
Seeds are collected at end of each round. If they are not eaten, they die.	Habitat and Predators -Same as Test. Eat the time with predators.	Predator Prey (Round 3) Two habitat of sharpening pizza mix. Cut in habitat in half.
• If you are less than 30 you die. you will play again. Lives. • If you have more than 30 you survive again.	-You still need 30 energy units. -You are safe from perception if you are touching Habitat cup. -Predators can only walk into numbers, only tag someone and if they do/become, don't stop. -feeding and run away when you are standing over there holding hands rules).	-Only one Food Food. -Predators still exist but to smaller increases.

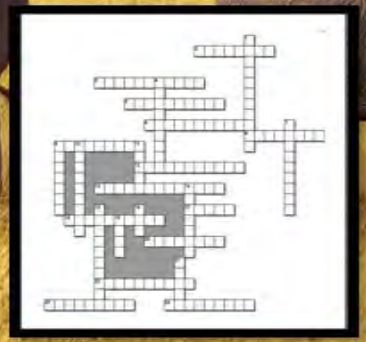
White beans = 1
Red Beans = 5
Green Beans = 10

Describe the competition for resources that you experienced?

What type of seeds did you look for? Why?

How did predators (hawks) change your feeding?

How did habitat help you?



Across

2. _____ Capacity: The amount of food that an area of land will yield.
3. _____ Niche: The theoretical role, place, or function that a species has within its ecosystem.
5. The frozen water part of our planet.
6. All waters not in atmosphere and lithosphere
8. _____ Niche: The way of life that an organism is reduced to live in due to limiting factors
9. Competitive _____: One thrives, the other goes extinct. No two species with the same job can coexist.
12. The interaction between organisms or species, in which the fitness of one is lowered by the presence of another
13. A region of space surrounding an astronomical object in which charged particles are affected by that object's magnetic field.
17. A regional ecosystem characterized by distinct types of vegetation, animals. Determined by temperature and rainfall.
18. The area of gases that surround the planet.
20. An organism that lives by preying on other organisms.
22. Organism with unique DNA and cells
23. The relationships between groups of populations.
24. Refers to the solid parts of the Earth; it is used along with atmosphere, hydrosphere, cryosphere to describe the systems of the Earth (Abiotic=non-living)

_____=teacher can remove this word bank to make puzzle more challenging—

Possible Answers
COMMUNITY, ECOSYSTEM, PREDATOR, ATMOSPHERE, BIOME, BIOSPHERE, CARRYING, COMMUNITY, COMPETITION, CRYOSPHERE, ECOLOGY, EXCLUSION, FUNDAMENTAL, GEOSPHERE, HABITAT, HYDROSPHERE, INDIVIDUAL, LITHOSPHERE, MAGNETOSPHERE, NICHE, POPULATION, PREY, REALIZED, SPACE, WEB

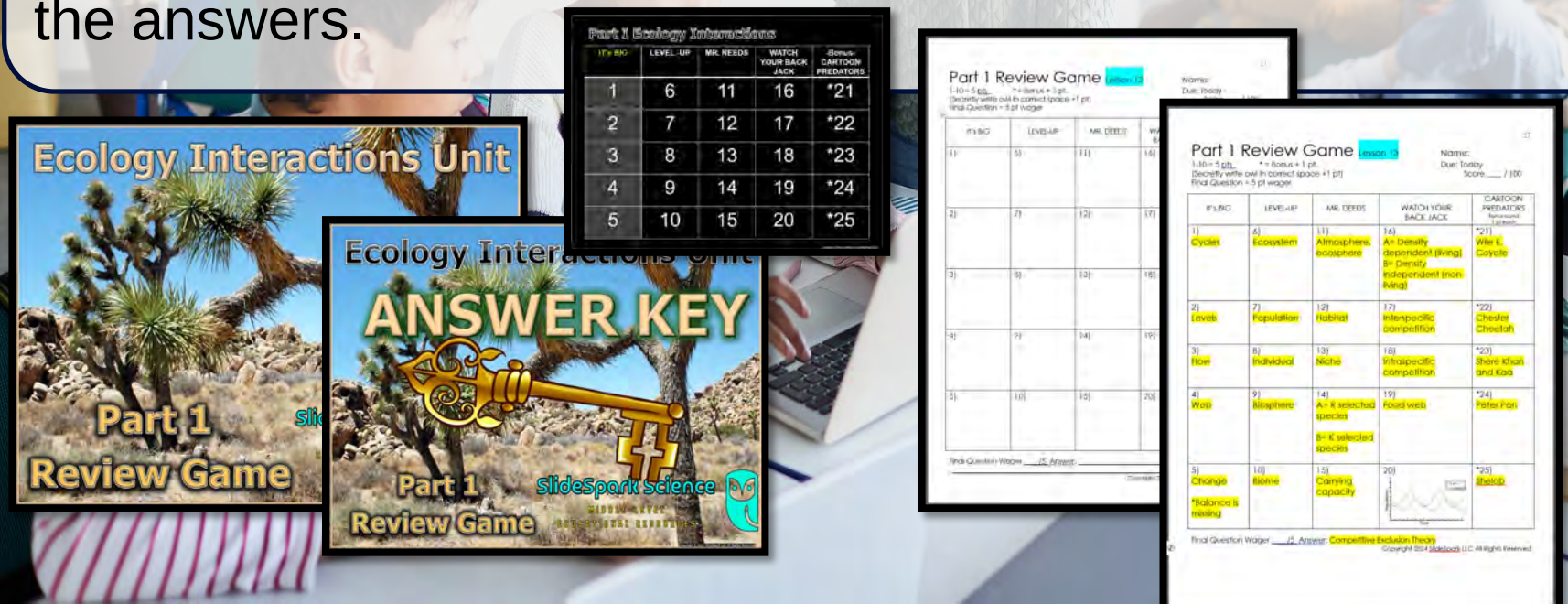
Down

1. Below the surface, in the crust and mantle.
4. The relationships of populations with each other and their environment.
7. The part of the earth and its atmosphere in which living organisms exist.
9. A study of the relationship between living things and the environment
10. _____ ecology: The study of interacting populations
11. Ecological _____: The place or function of a given organism within its ecosystem "Job"
14. The type of environment in which an organism lives.
15. Groups of similar individuals who tend to mate with each other in a limited geographic area.
16. Food _____: A complex network of many interconnected food chains and feeding interactions.
19. An animal hunted for food.
21. The needs of an organism are... Air, Water, Food, Shelter, _____

with Answer Key

Review Games / Assessments

This unit concludes with a review quiz. Answers are provided in slideshow form so students can self assess. A blank template sheet is provided in the work bundle. Students can benefit from working together in small table groups with quiet communication. You can decide if you want to allow the use of work bundles or not. These are a nice review opportunity and get the students looking through their work bundles for the answers.



Animals in the Environment Quiz Game

Camouflage

- Name the correct type of camouflage for the picture? (Can only use each once 7-10)
  - Concealing Coloration, Disruptive Coloration, ~~Disguise~~, or ~~Mimicry~~.

8

Biodiversity

- Which species below has warning coloration?

- Which species is the venomous coral snake and which species is the nonvenomous king snake?

- This is the type of mimicry where several unrelated species share warning colors that warn predators that these colors are dangerous or toxic.

- This is the type of mimicry where a organism resembles another spe dangerous or may taste bad.

- Name the Big Concept. 19
- All organisms are in a constant state of [redacted] over time with the environment.
  - This can occur with another species and they will develop special interactions. Others with the nonliving world.

- Please fill in the missing words... 17
- The predator-prey relationship is important in maintaining balance among different animal species. A[redacted]s that are beneficial to prey, such as camouflage, mimicry, and chemical and physical defenses, ensure that the species will s[redacted]
  - At the same time, p[redacted] must undergo certain adaptive changes to make finding and capturing prey less difficult.

- Which is not an importance of biodiversity
  - A.) Generation of soils and maintenance of soil quality.
  - B.) Maintenance of air quality.
  - C.) Maintenance of water quality.
  - D.) Pest Control
  - E.) Detoxification and decomposition of wastes.
  - F.) Pollination and crop production.
  - G.) Biodiversity increases food security.
  - H.) Provision of health care (Medicines).
  - I.) Income generation.
  - J.) Spiritual / cultural value.

3

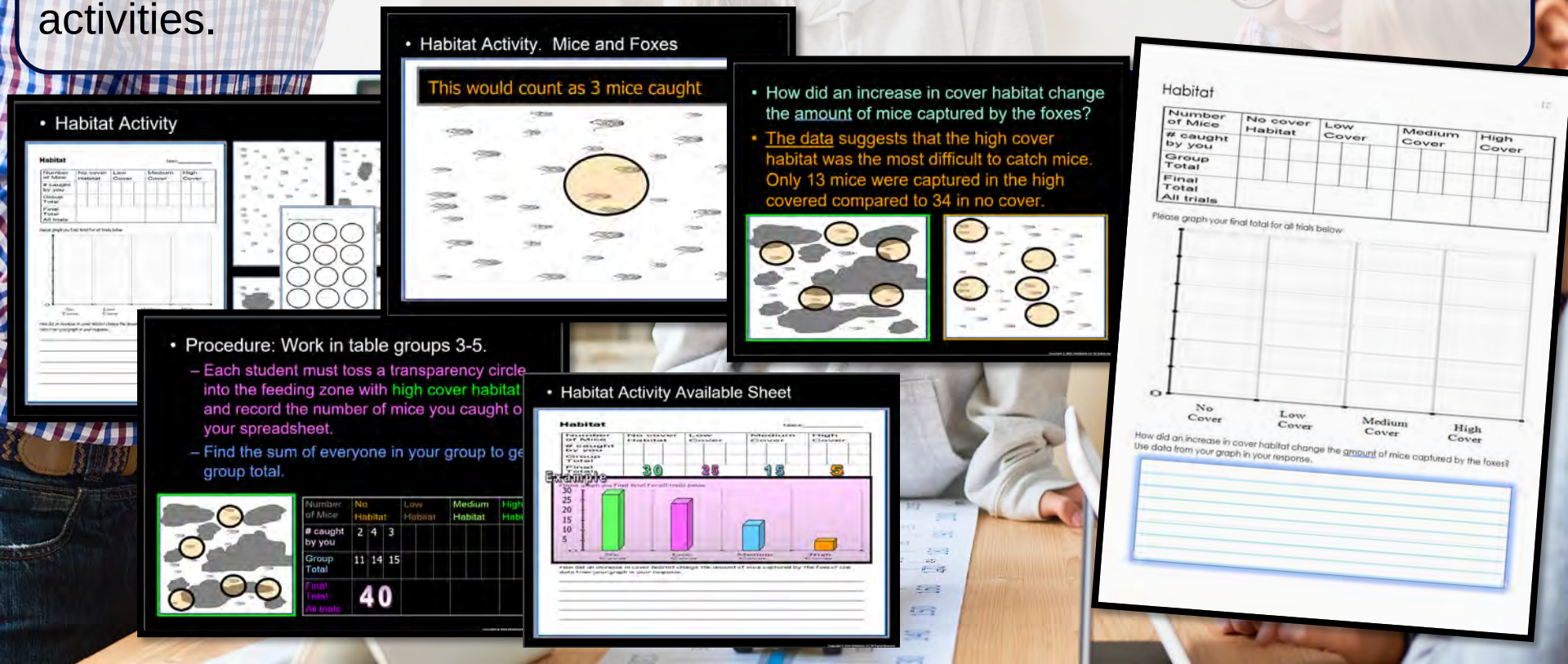
Answer is...

- This is the term for the variety, or number of kinds of species living in an area.

Find the relative abundance of stars 50%? 1

Activities / Labs

Our science activities are designed to help students explore and understand complex scientific concepts in an engaging and interactive way. Each science unit includes several hands-on activities that encourage students to collect data and think critically about the world around them. Our easy-to-follow slideshow provides detailed visuals, simple materials, and clear directions, making it easy for both students and teachers to navigate the activities.



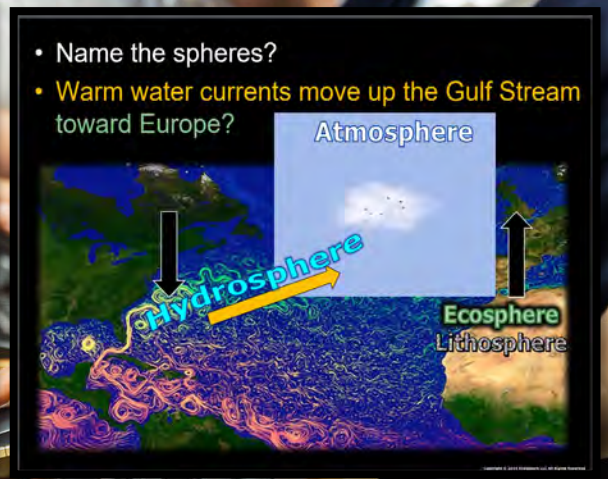
Built-in Assessment

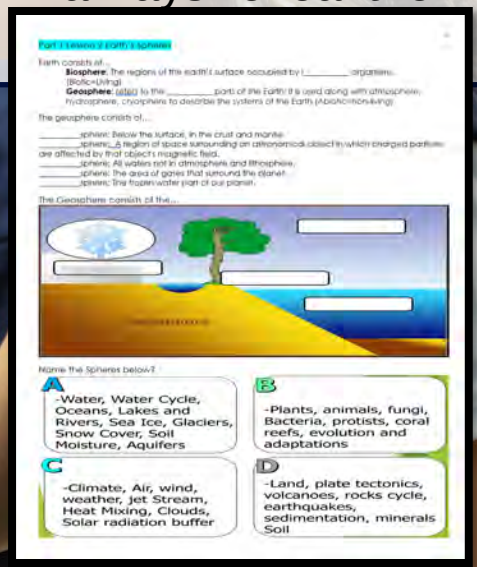
Each unit contains several built-in assessment questions that students answer in their work bundle. With the question revealed before the answer, the teacher can easily call on individual students or table groups to respond. These provide an effective and efficient way for teachers to assess student learning.

Questions in Work Bundle

Built-in Questions and Assessments

Many slides will have relevant terms covered with a box. When advancing through the slideshow an outline around the box will glow with a bright color. The next slide will make the box disappear. These slides allow the teacher to call upon students or table groups / check for understanding before advancing. The team at SlideSpark has found that using this technique helps to keep the students focused. Constantly recalling and reviewing information learned is necessary when moving through a large unit. The slideshows don't just give everything away for free. Students should be able to demonstrate knowledge before moving on. Some slides have full questions instead of just covered terms. In these slides, the teacher should encourage small group work. The teacher can then call upon one or two groups to share before advancing the slide. The next slide will always reveal the correct answer.



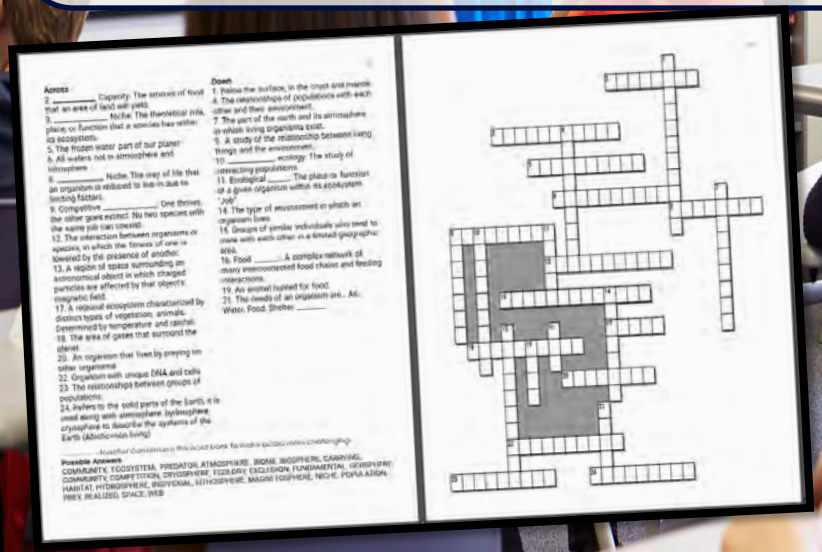


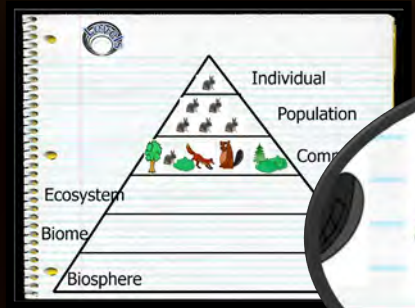
Built-in Video Links

Our science education program is designed with the modern, multimedia learner in mind, and our video links are a perfect complement to our educational materials. These short clips are embedded into the slideshow at just the right places for a fantastic review. Whether you're studying biology, chemistry or physics, our video links are an excellent way to reinforce your learning.

Games and Review

Games are a fantastic way for students to learn scientific concepts while having fun. We incorporate a variety of games into our curriculum, including interactive quizzes and puzzles that challenge students to think critically about the material. Our Hidden Box Games are a particularly popular feature, which conclude each unit by revealing a picture related to the topic. Students try to guess what the picture might be, making learning an engaging experience.





The Owl - Each Part of the slideshow has a small clipart Owl hiding somewhere in a slide. The owl is incredibly small and blended into just the right slide. If a student spots the “Owl” they can raise their hand high into the air. When you call upon the student they can say “Owl" and be the student who spotted the Owl. Each PowerPoint Review game also has an owl hiding in it worth one point. Remind the students that they secretly write the word "owl" rather than yell it out during the review games. The Owl search is not included in every lesson. A slide at the beginning of the lesson will alert the students that today is an “Owl’ day. Everything arrives editable so delete if you wish. You will find that some students will become the expert owl hunters in the group.

Google Classroom Compatible

Our digital learning programs are designed for students to learn science in a flexible and engaging environment. Our Google Classroom-compatible units provide a seamless learning experience whether your students are in the classroom or learning from home. Our step-by-step slideshows and student work bundles ensure that students can complete their work independently. The PowerPoint Slideshows and step-by-step work bundles can easily be loaded to your Google Drive and posted in your Google Classroom. These are great for daily lessons, students who need additional time, and for a student who was absent and looking to catch up in their work bundle.

Part 1 Lesson 11 Predator Pr...
Google Slides

Part 1 Lesson 12 Wrap Up
Google Slides

Part 1 Lesson 13 Review Ga...
Google Slides

Part 1 Lesson 10 Feeding Si...
Google Slides

Part 1 Lesson 3 Sphere Inter...
Google Slides

Part 1 Lesson 9 Food Webs
Google Slides

Part 1 Lesson 7 Population ...
Google Slides

Part 1 Lesson 8 Competition
Google Slides

Part 1 Lesson 6 Need Niches
Google Slides

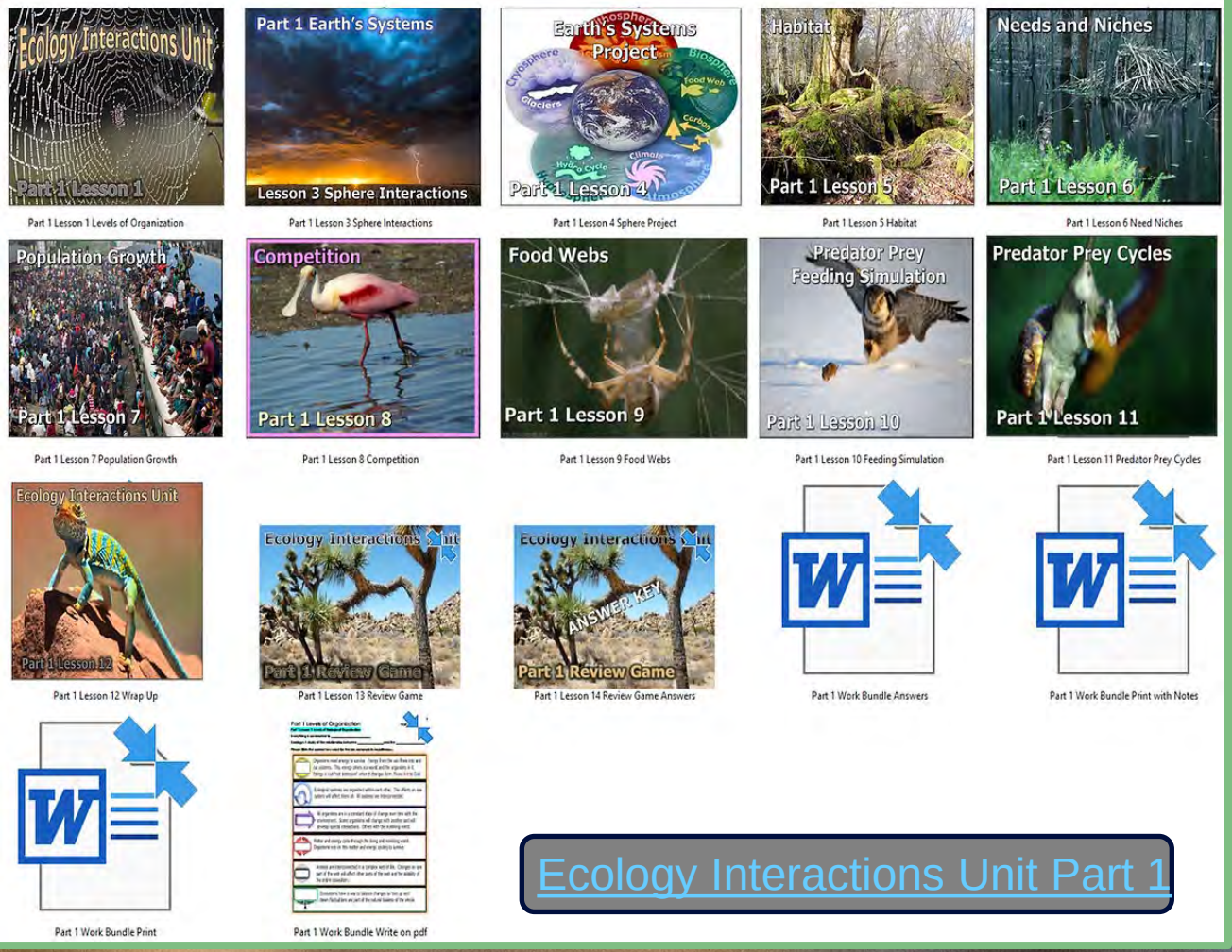
Part 1 Lesson 4 Sphere Proj...
Google Slides

Part 1 Lesson 2 Earths Sphe...
Google Slides

Part 1 Lesson 5 Habitat
Google Slides

Part 1 Lesson 1 Levels of Or...
Google Slides

Part 1: 13 Lessons of 50 minutes, and 30 Page Work Bundle, Levels of Biological Organization (Ecology), Big Concepts in Eco-Literacy, Diagram of the Levels of Biological Organization, Individuals, Populations, Communities, Ecosystems Large and Small, Biomes, Biosphere, Making a Pyramid of the Levels of Organization Activity, Earth's Spheres, Atmosphere, Hydrosphere, Cryosphere, Lithosphere, Geosphere, Ecosphere, Sphere Interactions, Examples of Sphere Interactions, Hydrosphere Interaction Demo, How Matter and Energy move through the Spheres, Sphere Interaction Project, Habitat, Examples of Animals and their Habitat, Microhabitats, Habitat Lab Activity, Needs of Organisms, Ecological Niche, Case Study on the African Dung Beetle, Fundamental Niche vs Realized Niche, Human Population Growth, Carrying Capacity, R and K Species, Animal Competition, Types of Competition, Intraspecific Competition, Interspecific Competition, Interference, Exploitative Competition, Competition Quiz, Competitive Exclusion Theory, Animal Competition Simulation of Spoon Beaks vs. Grabber Beaks, MacArthur's Warblers Case Study, Animal Interactions, Food Webs, Food Web Collapse Class Activity with String, Predator Prey Relationships, Feeding Strategies, Generalists vs. Specialist, Foraging Simulation with Bean Seeds in the Grass, Herbivore Survival Strategies, Predator Prey Cycles, Predatory Prey Cycle Notecard Toss Activity, Density Dependent and Density Independent Limiting Factors, Box Games, Board Game Review, Crossword Puzzle, Assessment.



Ecology Interactions Unit Part 1

Ecology Interactions Unit

Ecology Interactions Unit

Ecology and the Environment: Interactions Unit
3 Parts, 30 Lessons (5th or 6th grade – Easier), Part 1 has 30 page bundle, Part 2 has a 15 page work bundle, Part 3 has a 24 page work bundle -Areas of Focus within The Ecology Interactions Unit: Levels of Biological Organization (Ecology), Parts of the Biosphere, Habitat, Ecological Niche, Types of Competition, Competitive Exclusion Theory, Animal Interactions, Food Webs, Predator Prey Relationships, Camouflage, Population Sampling, Abundance, Relative Abundance, Diversity, Mimicry, Batesian Mimicry, Mullerian Mimicry, Symbiosis, Parasitism, Mutualism, Commensalism, Plant and Animal Interactions, Coevolution, Animal Strategies to Eat Plants, Plant Defense Mechanisms, Exotic Species, Impacts of Invasive Exotic Species.

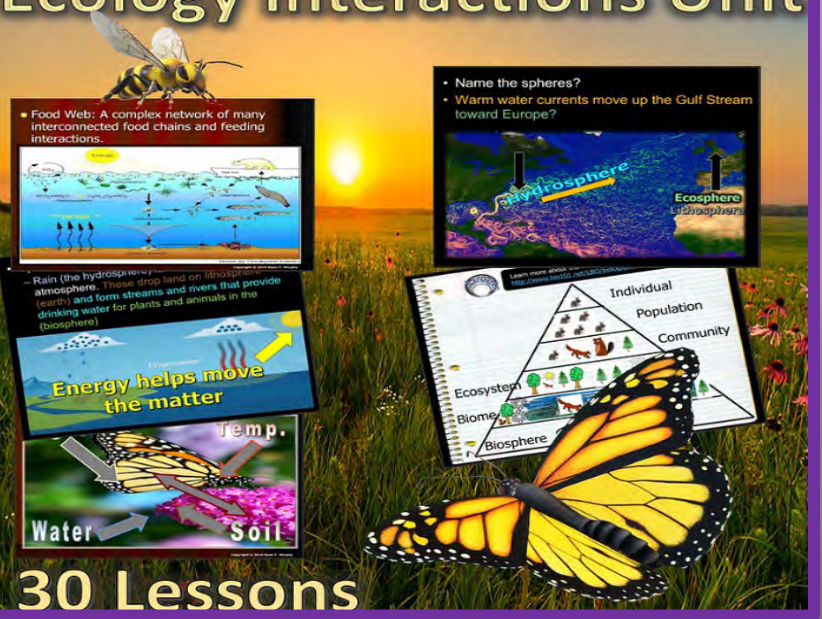
3 Parts, 30 Lessons (5th or 6th grade – Easier), Part 1 has 30-page bundle, Part 2 has a 15-page work bundle, Part 3 has a 24-page work bundle.

Ecology Interactions Unit Part 1: Levels of Biological Organization (Ecology), Big Concepts in Eco-Literacy, Diagram of the Levels of Biological Organization, Individuals, Populations, Communities, Ecosystems Large and Small, Biomes, Biosphere, Making a Pyramid of the Levels of Organization Activity, Earth's Spheres, Atmosphere, Hydrosphere, Cryosphere, Lithosphere, Geosphere, Ecosphere, Sphere Interactions, Examples of Sphere Interactions, Hydrosphere Interaction Demo, How Matter and Energy move through the Spheres, Sphere Interaction Project, Habitat, Examples of Animals and their Habitat, Microhabitats, Habitat Lab Activity, Needs of Organisms, Ecological Niche, Case Study on the African Dung Beetle, Fundamental Niche vs Realized Niche, Human Population Growth, Carrying Capacity, R and K Species, Animal Competition, Types of Competition, Intraspecific Competition, Interspecific Competition, Interference, Exploitative Competition, Competition Quiz, Competitive Exclusion Theory, Animal Competition Simulation of Spoon Beaks vs. Grabber Beaks, MacArthur's Warblers Case Study, Animal Interactions, Food Webs, Food Collapse Class Activity with String, Predator Prey Relationships, Feeding Strategies, Generalists vs. Specialist, Foraging Simulation with Bean Seeds in the Grass, Herbivore Survival Strategies, Predator Prey Cycles, Predatory Prey Cycle Notecard Toss Activity, Density Dependent and Density Independent Limiting Factors, Box Games, Board Game Review, Crossword Puzzle, Assessment.

Ecology Interactions Unit Part 2 Part 2: Abundance, Relative Abundance, Calculating Relative Abundance from a Population, Pie Graph of Result, Species Composition, Diversity, Biodiversity, Importance of Biodiversity, Case Study on the Lord Howe Stick Insect, Biodiversity Jenga Activity, How to Maintain Biodiversity, Case Study of Plantation Forestry vs. Native Growth in Tasmania, Find the Animal Fun Camouflage Quiz, Camouflage, Four Types of Camouflage, Camouflage a Gecko in the School Project, Mimicry, Tour of the Worlds fantastic Mimics, Batesian Mimicry, Being a young bird Nastieeos and Tastieeos / Bean Boozled and experiencing Batesian Mimicry Simulation, Aggressive Mimicry, Case Study on the Alligator Snapping Turtle, Beat the Butterfly Man Challenge, Aposematic Coloration, Mullerian Mimicry, Mullerian Coloring Activity, Other Interesting Ways Animal Avoid Predation, Box Games, Crossword Puzzle, Assessment

Ecology Interactions Unit Part Part 3: Symbiosis, Types of Symbiosis, Parasitism, Major groups of Parasites, Complicated Life Cycle of Parasites, Case Study on the Zombie Snail, Endoparasites, Ectoparasites, Examples with Visuals of many Parasites across the globe, Case Study on the Sea Lamprey, Brood Parasitism and the Cowbird, Perfect Parasite Presentation Project, Coevolution, Ecological Relationships, Mutualism, Types of Mutualisms, Trophic Mutualisms, Case Study on Leaf Cutter Ants, Cleaning Symbiosis, Defensive Mutualism, Dispersive Mutualism, Commensalism, Moving Quiz, Herbivory, Animal Strategies to Eat Plants, Plant Defense Mechanisms, Types of Mechanical Defenses, Poisonous Plants, Case Study on Identifying Poison Ivy, Poison Ivy Quiz, Plants and Animals Defense and Offense Design Project, Exotic Species, How Humans Spread Exotic Species, Invasive Exotic Species, Impacts of Invasive Exotic Species, Group Research of an Invasive Exotic Species Project, Biological Controls, Invasive Exotic Species WANTED Poster Project, Box Games, Crossword, Board Game Review, Assessment

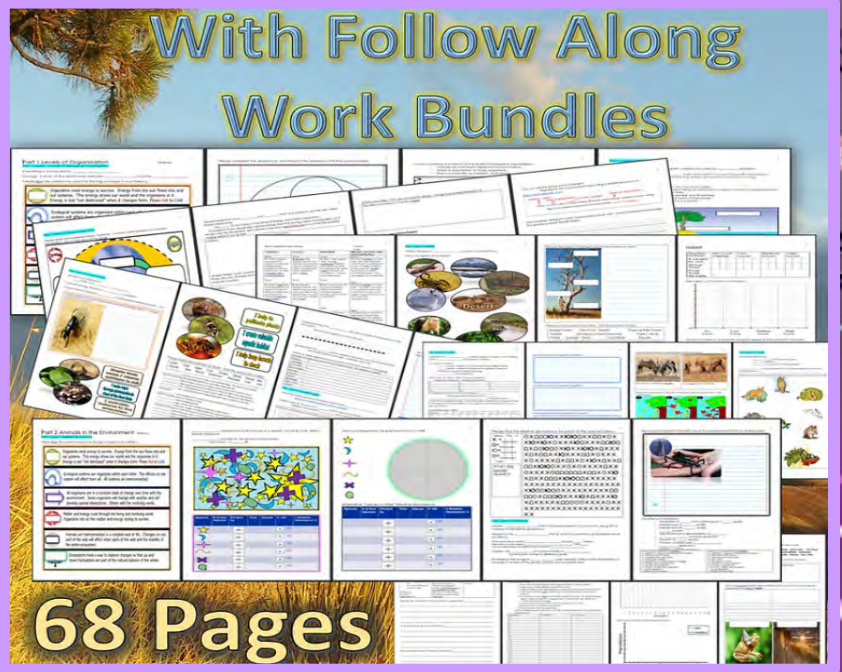
Ecology Interactions Unit



30 Lessons

Interactive Slideshows

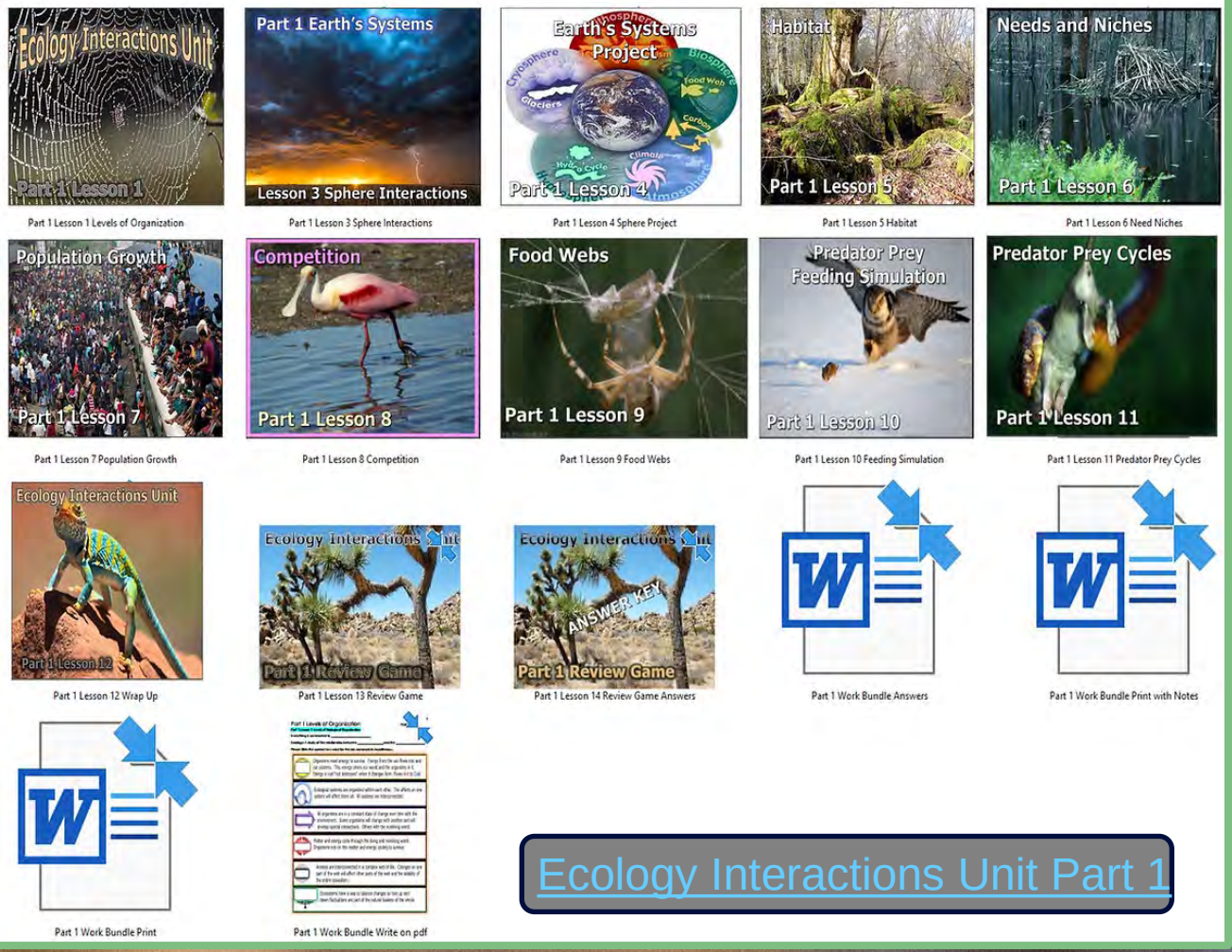
With Follow Along Work Bundles



68 Pages

Activities, Assessments, Games, and more all built-in

Part 1: 13 Lessons of 50 minutes, and 30 Page Work Bundle, Levels of Biological Organization (Ecology), Big Concepts in Eco-Literacy, Diagram of the Levels of Biological Organization, Individuals, Populations, Communities, Ecosystems Large and Small, Biomes, Biosphere, Making a Pyramid of the Levels of Organization Activity, Earth's Spheres, Atmosphere, Hydrosphere, Cryosphere, Lithosphere, Geosphere, Ecosphere, Sphere Interactions, Examples of Sphere Interactions, Hydrosphere Interaction Demo, How Matter and Energy move through the Spheres, Sphere Interaction Project, Habitat, Examples of Animals and their Habitat, Microhabitats, Habitat Lab Activity, Needs of Organisms, Ecological Niche, Case Study on the African Dung Beetle, Fundamental Niche vs Realized Niche, Human Population Growth, Carrying Capacity, R and K Species, Animal Competition, Types of Competition, Intraspecific Competition, Interspecific Competition, Interference, Exploitative Competition, Competition Quiz, Competitive Exclusion Theory, Animal Competition Simulation of Spoon Beaks vs. Grabber Beaks, MacArthur's Warblers Case Study, Animal Interactions, Food Webs, Food Web Collapse Class Activity with String, Predator Prey Relationships, Feeding Strategies, Generalists vs. Specialist, Foraging Simulation with Bean Seeds in the Grass, Herbivore Survival Strategies, Predator Prey Cycles, Predatory Prey Cycle Notecard Toss Activity, Density Dependent and Density Independent Limiting Factors, Box Games, Board Game Review, Crossword Puzzle, Assessment.



Ecology Interactions Unit Part 1

Part 2: 7 Lessons of about 50 minutes and 15 Page Work Bundle, Abundance, Relative Abundance, Calculating Relative Abundance from a Population, Pie Graph of Results, Species Composition, Diversity, Biodiversity, Importance of Biodiversity, Case Study on the Lord Howe Stick Insect, Biodiversity Jenga Activity, How to Maintain Biodiversity, Case Study of Plantation Forestry vs. Native Growth in Tasmania, Find the Animal Fun Camouflage Quiz, Camouflage, Four Types of Camouflage, Camouflage a Gecko in the School Project, Mimicry, Tour of the Worlds fantastic Mimics, Batesian Mimicry, Being a young bird Nastieeos and Tastieeos / Bean Boozled and experiencing Batesian Mimicry Simulation, Aggressive Mimicry, Case Study on the Alligator Snapping Turtle, Beat the Butterfly Man Challenge, Aposematic Coloration, Mullerian Mimicry, Mullerian Coloring Activity, Other Interesting Ways Animal Avoid Predation, Box Games, Crossword Puzzle, Assessment

Ecology Interactions Unit Part 2

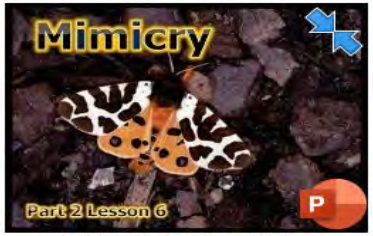
Part 2 Lesson 1 Relative Abundance

Part 2 Lesson 2 Biodiversity

Part 2 Lesson 3 Camouflage

Part 2 Lesson 4 Mimicry

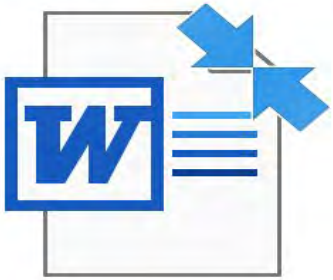
Part 2 Lesson 5 Batesian Mimicry

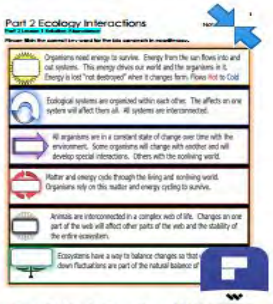


Part 2 Lesson 6 Mullerian Mimicry

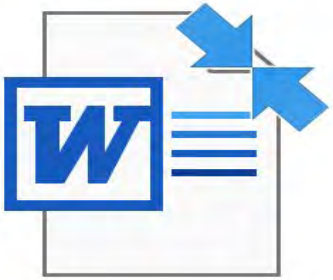
Part 2 Lesson 7 Review Game

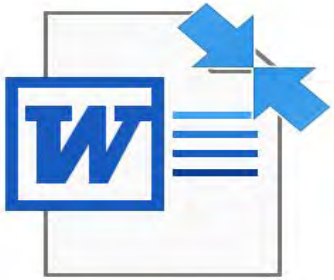
Part 2 Lesson 8 Review Game Answers


Part 2 Work Bundle Answers



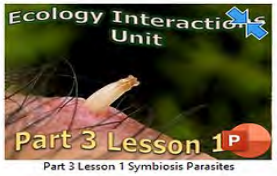
Part 2 Work Bundle pdf Writable


Part 2 Work Bundle Print with Notes


Part 2 Work Bundle Print

Part 3: 11 Lessons of 50 minutes and 24 Page Work Bundle, Symbiosis, Types of Symbiosis, Parasitism, Major groups of Parasites, Complicated Life Cycle of Parasites, Case Study on the Zombie Snail, Endoparasites, Ectoparasites, Examples with Visuals of many Parasites across the globe, Case Study on the Sea Lamprey, Brood Parasitism and the Cowbird, Perfect Parasite Presentation Project, Coevolution, Ecological Relationships, Mutualism, Types of Mutualisms, Trophic Mutualisms, Case Study on Leaf Cutter Ants, Cleaning Symbiosis, Defensive Mutualism, Dispersive Mutualism, Commensalism, Moving Quiz, Herbivory, Animal Strategies to Eat Plants, Plant Defense Mechanisms, Types of Mechanical Defenses, Poisonous Plants, Case Study on Identifying Poison Ivy, Poison Ivy Quiz, Plants and Animals Defense and Offense Design Project, Exotic Species, How Humans Spread Exotic Species, Invasive Exotic Species, Impacts of Invasive Exotic Species, Group Research of an Invasive Exotic Species Project, Biological Controls, Invasive Exotic Species WANTED Poster Project, Box Games, Crossword, Board Game Review, Assessment

Ecology Interactions Unit Part 3



Part 3 Lesson 1 Symbiosis Parasites

Part 3 Lesson 2 Parasite Project

Part 3 Lesson 3 Mutualism

Part 3 Lesson 4 Animal Offenses

Part 3 Lesson 5 Plant Defenses

Part 3 Lesson 6 Presentation Wrap Up

Part 3 Lesson 7 Exotic Species

Part 3 Lesson 8 Negative Impacts

Part 3 Lesson 9 WANTED Poster

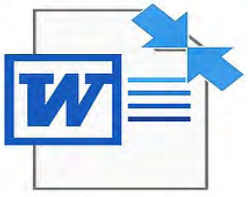
Part 3 Lesson 10 Board Game

Part 3 Lesson 11 Review Game

Part 3 Lesson 12 Review Game Answers


Part 3 Work Bundle Answers


Part 3 Work Bundle pdf Writable


Part 3 Work Bundle Print with Notes


Part 3 Work Bundle Print

Curriculum Guide

Number of Lessons in each unit (50 min, daily lessons) and difficult rating scale / intended grade level.

=Easier, 

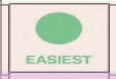
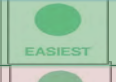
= More difficult, 

=Most difficult

Earth Science Units	Daily Lessons	Intended Grade	
Geology Topics Unit	60 Lessons	6-8 medium difficulty	MORE DIFFICULT
Weather and Climate Unit	40 Lessons	6-8 medium difficulty	MORE DIFFICULT
Astronomy Unit	60 Lessons	6-8 medium difficulty	MORE DIFFICULT
Weathering, Soil Sciences	28 Lessons	5-7 easier	EASIEST
Rivers and Water Quality	25 Lessons	5-7 easier	EASIEST
Water Molecule Unit	20 Lessons	5-7 easier	EASIEST

Earth Science Curriculum

Life Science Units

	Daily Lessons	Intended Grade	
Ecology Feeding Levels Unit	13 Lessons	5-6 easier	
Ecology Interactions Unit	30 Lessons	5-6 easier	
Ecology Abiotic Factors Unit	24 Lessons	5-6 easier	
Botany Unit	50 Lessons	5-7 easier	
Evolution and Natural Selection	40 Lessons	5-7 easier	
Taxonomy and Classification	50 Lessons	6-8 medium difficulty	
Infectious Diseases Unit	30 Lessons	7-9 more difficult	
DNA and Genetics Unit	42 Lessons	8-10 most difficult	
Human Body Systems Unit	85 Lessons	6-8 medium difficulty	
Cell Biology Unit	30 Lessons	8-10 most difficult	

Life Science Curriculum

Physical Science	Daily Lessons	Intended Grade	
Laws of Motion and Machines Unit	33 Lessons	8-10 most difficult	
Matter Energy and the Environment	58 Lessons	7-10 medium difficulty	
Atoms and Periodic Table Unit	44 Lessons	8-10 most difficult	
Science Skills Unit	30 Lessons	5-7 medium difficulty	

Physical Science Curriculum

Entire SlideSpark Science Curriculum

Dear Valued Educator,

Our fully editable .pptx and .doc resources are perfect for educators looking to bring enthusiasm and creativity to their lessons. We encourage you to make changes to fit your needs and style. As science educators, we're committed to providing students with the tools they need to succeed in the classroom and beyond. Each unit in the curriculum includes a range of resources that have been developed through extensive research and use in a busy classroom. Our teaching approach is designed to make science education engaging and exciting for learners of all ages. We offer a one-of-a-kind science curriculum that will challenge, inspire, and educate students to become tomorrow's scientists and leaders. Join us today and learn more about how our program can help you achieve your classroom goals.

With appreciation,

Support@SlideSpark.net

Thank you for your time and interest in our Science curriculum. We strive to provide students with engaging and informative lessons that will spark their curiosity and encourage scientific exploration. Should you have any questions or concerns, please do not hesitate to contact us. Thank you again for considering our curriculum, and we wish you all the best in your educational journey.

Sincerely,

Support@slidespark.net

SlideSpark Science

MIDDLE-LEVEL

EDUCATIONAL RESOURCES

SlideSpark Science on TpT